In the Claims:

Please amend the claims as follows:

1. (currently amended) A signal conditioning device, comprising:

a processor;

~~an input coupled to~~ an input coupled to the processor and to be coupled to a signal uncoupled from a control unit; and

~~an output coupled to~~ an output coupled to the processor to have incident thereon a modified signal and to be coupled to the control unit in place of the signal;

wherein the processor has stored thereon instructions which, when executed by the processor, cause the processor to provide the modified ~~an output~~ signal at the output such that the modified signal ~~incident at the output that~~ corresponds to the ~~an input~~ signal, modified to effect operation of an apparatus due to a change of a component of the apparatus ~~incident at the input~~.

2. (currently amended) The signal conditioning device of claim 1, further comprising:

a second input coupled to the processor to receive a second signal incident thereon; and

a third input coupled to the processor to receive a third signal incident thereon; and

wherein the instructions, when executed by the processor, further cause the processor to offset the modified ~~output~~ signal from the ~~input~~ signal based on the second and third signals.

3. (currently amended) The signal conditioning device of claim 2, wherein the signal to be coupled to ~~incident at~~ the input is related to air mass, the second signal is related to engine speed ~~operating level~~ and the third signal is related to throttle position ~~desired engine operating level~~.

4. (withdrawn) The signal conditioning device of claim 3, wherein the engine operating level signal includes engine speed and the desired engine operating level includes a position of a throttle.

5. (currently amended) A ~~The~~ signal conditioning device ~~of claim 2~~, comprising:

a processor;

a first input coupled to the processor;

an output coupled to the processor;

a second input coupled to the processor and to be coupled to a second signal incident thereon;

a third input coupled to the processor and to be coupled to a third signal incident thereon; and

~~wherein~~ memory coupled to the processor containing a table indexed by the second and third signals and containing a plurality of ~~contains~~ modifiers ~~and a modifier~~ corresponding to ~~a current~~ levels of the second signal and ~~a current~~ levels of the third signal ~~is used to calculate the output signal~~;

wherein the processor has instructions which, when executed by the processor, cause the processor to provide an output signal incident at the output that corresponds to a first input signal incident at the first input offset based on the modifier corresponding to a current level of the second signal and a current level of the third signal.

6. (original) The signal conditioning device of claim 5, further comprising a user interface through which a user varies the modifier.

7. (original) The signal conditioning device of claim 5, further comprising non-volatile memory in which the modifier is stored.

8. (currently amended) The signal conditioning device of claim 1 ~~3~~, wherein the ~~input~~ signal is air temperature.

9. (currently amended) The signal conditioning device of claim 1 ~~3~~, wherein the modified ~~output~~ signal is a modified air temperature signal.

10. (currently amended) The signal conditioning device of claim 1 ~~3~~, wherein the ~~input~~ signal is air pressure.

11. (currently amended) The signal conditioning device of claim 1 ~~3~~, wherein the modified ~~output~~ signal is a modified air pressure signal.

12. (currently amended) The signal conditioning device of claim 1, wherein the ~~input~~ signal is to be de-coupled from an engine control unit input and the modified ~~output~~ signal is to be coupled to the engine control unit input.

13. (currently amended) The signal conditioning device of claim 12, wherein the engine control unit is to vary an amount of fuel to be delivered to an engine based on the level of the modified ~~output~~ signal.

14. (currently amended) The signal conditioning device of claim 1, wherein the modified ~~output~~ signal corresponds to the ~~input~~ signal and a factor.

15. (currently amended) The signal conditioning device of claim 1 ~~2~~, wherein the signal to be coupled to ~~incident at~~ the input is an output from an engine control unit, the second signal is related to engine speed ~~operating level~~ and the third signal is related to throttle position ~~desired engine operating level~~.

16. (currently amended) The signal conditioning device of claim 15, wherein the signal to be coupled to ~~incident at~~ the input is a fuel control signal.

17. (currently amended) The signal conditioning device of claim 15, wherein the signal to be coupled to the input is a pulse-width modulated signal provided from an engine control unit and the modified signal ~~incident at the output~~ is provided to a fuel actuator.

18. (withdrawn) The signal conditioning device of claim 15, wherein the engine operating level signal includes engine speed and the desired engine operating level includes a position of a throttle.

19. (currently amended) The signal conditioning device of claim 1, wherein the ~~input~~ signal is de-coupled from an actuator and the modified ~~output~~ signal is coupled to the actuator.

20. (original) A user interface, comprising:

a first switch causing the user interface to perform a first function when actuated for a short duration and causing the user interface to perform a second function when actuated for a long duration;

a second switch causing the user interface to perform a third function when actuated for a short duration and causing the user interface to perform a fourth function when actuated for a long duration;

a display that provides information related to the function selected by the first and second switches.

21. (original) The user interface of claim 20, wherein the first function, the second function, the third function, and the fourth function are related to engine fueling.

22. (original) The user interface of claim 20, wherein a short duration actuation includes depressing one of the first or second switches for less than one-half of one second and a long duration actuation includes depressing one of the first or second switches for more than one-half of one second.

23. (original) The user interface of claim 20, wherein:

the first function selects a control table;

the second function selects an area of the control table;

the third function steps a value related to the selected region of the selected control table; and

the fourth function switches the third function between stepping in a positive direction and a negative direction.

24. (original) The user interface of claim 23, wherein the control table selected immediately prior to de-energizing the user interface is active when the user interface is reenergized.

25. (original) The user interface of claim 23, wherein the value stepped by the third function is limited to a predetermined high value.

26. (original) The user interface of claim 23, wherein the value stepped by the third function is limited to a predetermined low value.

27. (original) The user interface of claim 23, wherein the control table and the region may be restored to a default control table with default regional values by actuating the first switch and the second switch when the user interface is energized.

28. (original) The user interface of claim 23, wherein the display indicates the selected region and a value associated with the selected region.

29. (original) The user interface of claim 20, wherein the first and second switches are actuated by depressing those switches.

30. (original) A method of modifying a signal, comprising:

uncoupling a signal that controls mass of fuel injected into a cylinder from an engine control unit input;

coupling the signal to a signal conditioning device input;

modifying the signal based on a current actual engine operating level and current desired engine operating level; and

coupling the modified signal to the engine control unit input.

31. (original) The method of claim 30, further comprising:

a user varying a value associated with a range of engine operating level and a range of desired engine operating level; and

modifying the signal based on the value associated with the current engine operating level and the current desired engine operating level.

Please add claims 32-64 as follows:

32. (new) A signal modifying device, comprising:

memory included with the signal modifying device having a control table stored thereon, the control table having a plurality of regions, each region corresponding to a system operating range, and a modifier associated with each region;

a processor included with the signal modifying device and coupled to the memory, the processor having instructions stored thereon which, when executed by the processor, cause the processor to access the control table;

a switch included with the signal modifying device and coupled to the processor which, when actuated, selects one region of the control table and changes the modifier associated with the selected region; and

a numeric display included with the signal modifying device and coupled to the processor, which displays the selected region of the control table and the modifier associated with the selected region.

33. (new) The signal modifying device of claim 32, further comprising:

a first input coupled to the processor and to be coupled to a first input signal;

a second input coupled to the processor and to be coupled to a second input signal related to system operating range; and

an output;

wherein the processor further includes instructions which, when executed, cause the processor to provide an output signal at the output that corresponds to the first input signal offset by the modifier corresponding to the current system operating range.

34. (new) The signal modifying device of claim 32, wherein the display is an alphanumeric display that indicates numbers and letters.

35. (new) The signal modifying device of claim 32, wherein the processor instructions, when executed by the processor, further cause the processor to interpolate between modifiers in adjacent modifier regions.

36. (new) A signal modifying device, comprising:

memory included with the signal modifying device having a control table stored thereon, the control table having a plurality of regions, each region corresponding to a system operating range, and a modifier associated with each region;

a processor included with the signal modifying device and coupled to the memory, the processor having instructions stored thereon which, when executed by the processor, cause the processor to access the control table;

a first switch included with the signal modifying device and coupled to the processor which, when actuated, selects one region of the control table;

a second switch included with the signal modifying device and coupled to the the processor which, when actuated, changes the modifier associated with the selected region; and

a numeric display included with the signal modifying device and coupled to the the processor, which displays the selected region of the control table and the modifier associated with the selected region.

37. (new) The signal modifying device of claim 36, wherein the device conditions the signal.

38. (new) The signal modifying device of claim 36, wherein the system includes an engine.

39. (new) The signal modifying device of claim 38, wherein the control table regions are indexed by engine speed and throttle position.

40. (new) The signal modifying device of claim 39, further comprising:

a first input coupled to the processor and to be coupled to a first input signal used in determining quantity of fuel to be provided to the engine;

a second input coupled to the processor and to be coupled to a second input signal related to engine speed;

a third input coupled to the processor and to be coupled to a third input signal related to throttle position; and

an output coupled to the processor;

wherein the processor further includes instructions which, when executed by the processor, cause the processor to provide an output signal at the output that corresponds to the first input signal offset by the modifier corresponding to the current engine speed and throttle position.

41. (new) The signal modifying device of claim 36, further comprising:

a first input coupled to the processor and to be coupled to a first input signal;

a second input coupled to the processor and to be coupled to a second input signal related to system operating range; and

an output;

wherein the processor further includes instructions which, when executed, cause the processor to provide an output signal at the output that corresponds to the first input signal offset by the modifier corresponding to the current system operating range.

42. (new) The signal modifying device of claim 36, wherein the display is an alphanumeric display that indicates numbers and letters.

43. (new) The signal modifying device of claim 36, wherein the processor instructions, when executed by the processor, further cause the processor to interpolate between modifiers in adjacent modifier regions.

44. (new) The signal modifying device of claim 36, further comprising a fuel injector control signal coupled to the first input.

45. (new) The signal modifying device of claim 36, further comprising to an air temperature sensor coupled to the first input.

46. (new) The signal modifying device of claim 36, further comprising an air pressure sensor coupled to the first input.

47. (new) The signal modifying device of claim 36, further comprising an air mass sensor coupled to the first input.

48. (new) The signal modifying device of claim 36, wherein the memory further includes a second control table having a plurality of regions, each region corresponding to a system operating range, and a modifier associated with each region; and

further comprising a switch to select the control table or the second control table.

49. (new) The signal modifying device of claim 48, wherein the operating ranges of the regions of the control table are not the same as the operating ranges of the regions of the second control table.

50. (new) A method of modifying a control table used in a signal modifying device, comprising:

selecting from the signal modifying device one of a plurality of regions of a control table;

inputting a modifier associated with the selected region of the control table from the signal modifying device; and

displaying the selected region of the control table and the modifier associated with the selected region on a numeric display on the signal modifying device.

51. (new) The method of claim 50, wherein the regions correspond to system operating ranges.

52. (new) The method of claim 50, wherein inputting includes incrementing the modifier.

53. (new) The method of claim 50, further comprising:

receiving a signal;

using the modifier to modify the signal; and

transmitting the modified signal.

54. (new) The method of claim 53, wherein the signal and the modified signal are associated with an engine.

55. (new) The method of claim 54, further comprising:

receiving a first operating range signal corresponding to engine speed; and

selecting the modifier used to modify the signal based on the first operating range signal.

56. (new) The method of claim 55, further comprising:

receiving a second operating range signal corresponding to throttle position; and

selecting the modifier used to modify the signal based on the first operating range signal and the second operating range signal.

57. (new) The method of claim 53, wherein using the modifier to modify the signal includes interpolating between modifiers in adjacent modifier regions.

58. (new) The method of claim 50, further comprising providing an output signal that corresponds to an input signal offset by the modifier corresponding to a current operating range of the system.

59. (new) The method of claim 58, wherein the modifier corresponds to current engine speed and throttle position.

60. (new) The method of claim 50, wherein the numeric display is an alphanumeric display that indicates numbers and letters.

61. (new) A unitary signal modifying device and user interface, comprising:

memory included with the signal modifying device having a control table stored thereon, the control table having a plurality of regions, each region corresponding to a system operating range, and a modifier associated with each region;

a processor coupled to the memory, the processor having instructions stored thereon which, when executed by the processor, cause the processor to access the control table and provide an output signal that corresponds to a first input signal offset by the modifier corresponding to a second input signal related to current system operating range;

a first switch coupled to the processor which, when actuated, selects one region of the control table;

a second switch coupled to the processor which, when actuated, changes the modifier associated with the selected region of the control table;

an alphanumeric display coupled to the processor, which displays the selected region of the control table and the modifier associated with the selected region of the control table;

a first input coupled to the processor and to be coupled to the first input signal;

a second input coupled to the processor and to be coupled to the second input signal related to system operating range; and

an output to provide the output signal.

62. (new) The signal modifying device of claim 61, wherein the display is an alphanumeric display that indicates numbers and letters.

63. (new) The signal modifying device of claim 61, wherein the processor instructions, when executed by the processor, further cause the processor to interpolate between modifiers in adjacent modifier regions.

64. (new) A signal modifying device, comprising:

a first input to be coupled to a system operating level sensor sensing a desired system operating range;

a second input;

an output; and

a processor coupled to the first input, the second input, and the output and having instructions stored thereon which, when executed by the processor, cause the processor to recognize at least two regions within the desired system operating range and associate a modifier with each of the regions, provide an output signal incident at the output that corresponds to a signal incident on the second input offset by the modifier for the region associated with the current sensed system operating level, and interpolate between modifiers in adjacent regions when the current system operating level approaches a system operating level defined where the regions meet.